

REMARKS

Claims 1-6 and 8-12 are pending in the application.

Rejections under 35 U.S.C. §103(a)

Claims 1-6 and 8-12 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. No. 4,079,028 to Emmons et al. (hereinafter "Emmons"). The Examiner maintains the rejection, indicating that it would have been obvious to a skilled artisan would have been expected to pick and choose from the disclosure of Emmons to arrive at the claimed combination of ingredients. Applicants respectfully request reconsideration and not that the Examiner has not maintained the previous rejection over WO 96/30425.

The present invention is directed to a water-soluble or water-dispersible polyurethane that includes the reaction product of at least one polyether polyol at least one urethane group-containing polyether polyol, at least one C₆-C₂₂ monoalcohol, at least one (cyclo)aliphatic and/or aromatic diisocyanate including isophorone diisocyanate, optionally at least one C₄-C₁₈ monoisocyanate, and optionally at least one polyisocyanate having an average functionality of >2. The polyether polyol has an average functionality of ≥ 3. The urethane group-containing polyether polyol has an average functionality of ≥ 4. The starting NCO/OH equivalent ratio is between 0.5:1 to 1.2:1. The polyurethane has a softening point of from 10°C to 80°C.

Emmons discloses latex and other aqueous systems thickened by incorporation of a low molecular weight polyurethane characterized by at least three hydrophobic groups interconnected by hydrophilic polyether groups. The thickeners are prepared at 60°C in a solvent (toluene). At the end of the reaction, the product is isolated by evaporation.

Emmons does not disclose or in any way suggest using isophorone diisocyanate (IPDI) as is required in the amended claims. Emmons only provides a general disclosure of organic polyisocyanates and a laundry list that does not include IPDI.

IPDI is essential to the present invention to provide positive rheological properties (see examples 2, 3, 5, and 6 on pages 12-13 of the specification).

Applicants submit herewith a Declaration under 37 C.F.R. § 1.132 by one of the present inventors, Dr. Frank Sauer. In his declaration, Dr. Sauer describes experiments that show that Isophorone isocyanate (IPDI) in combination with or without IPDA leads to improved rheological properties. This is not disclosed or suggested by Emmons.

Because Emmons does not disclose or in any way suggest using IPDI or the improved rheological efficiency obtained when IPDI is used in the present water-soluble or water-dispersible polyurethane, Emmons cannot render the present claims obvious. As such, the rejection of Claims 1-6 and 8-12 under 35 U.S.C. §103(a) should be withdrawn.

Rejections under obviousness-type double patenting

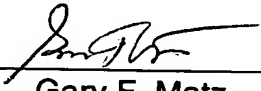
Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-16 of copending application Serial No. 10/091,960 and Claims 1-12 of copending application Serial No. 10/092,077.

Applicants request the Examiner hold this rejection in abeyance until such time as the present claims are allowed, at which time Applicant will file an appropriate Terminal Disclaimer to remove the rejection.

CONCLUSION

Applicants submit that the instant application is in condition for allowance. Accordingly, reconsideration and a Notice of Allowance are respectfully requested for Claims 1-6 and 8-12. If the Examiner is of the opinion that the instant application is in condition for other than allowance, he is requested to contact the Applicants' agent at the telephone number given below so that additional changes to the claims may be discussed.

Respectfully submitted,

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